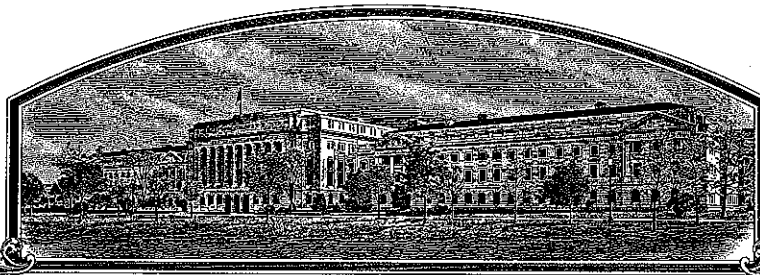


No.

200500121



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

University of Georgia Research Foundation, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMERICAL GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

PEANUT

'Georgia-04S'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this twenty-sixth day of July, in the year two thousand and five.

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture



U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER University of Georgia Research Foundation, Inc.		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME GA 982502	3. VARIETY NAME Georgia-04S
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) Boyd Graduate Studies Research Center Athens, GA 30602-7411		5. TELEPHONE (include area code) (706) 542-5944	<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center; margin: 0;">FOR OFFICIAL USE ONLY</p> <p style="font-size: 1.2em; margin: 5px 0;">2005 00121</p> <p style="margin: 5px 0;">FILING DATE</p> <p style="font-size: 1.5em; margin: 5px 0;">2-3-2005</p> </div>
		6. FAX (include area code) (706) 542-3837	
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) Corporation	8. IF INCORPORATED, GIVE STATE OF INCORPORATION GA	9. DATE OF INCORPORATION November 17, 1978	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) Dr. John Ingle University of Georgia Research Foundation, Inc. Boyd Graduate Studies Research Center Athens, GA 30602-7411			<div style="border: 1px solid black; padding: 5px;"> <p>FILING AND EXAMINATION FEES:</p> <p>\$ 3652.00</p> <p>DATE 2-3-2005</p> <p>CERTIFICATION FEE:</p> <p>\$ 432.00</p> <p>DATE 4/22/2005</p> </div>
11. TELEPHONE (Include area code) (706) 542-5944	12. FAX (Include area code) (706) 542-3837	13. E-MAIL	
14. CROP KIND (Common Name) Peanut	16. FAMILY NAME (Botanical) Leguminosae (Fabaceae)	18. DOES THE VARIETY CONTAIN ANY TRANSGENES? (OPTIONAL) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERCIALIZATION.	
15. GENUS AND SPECIES NAME OF CROP Arachis hypogea L.	17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)		20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act) <input checked="" type="checkbox"/> YES (If "yes", answer items 21 and 22 below) <input type="checkbox"/> NO (If "no", go to item 23)	
a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety		21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness		IF YES, WHICH CLASSES? <input checked="" type="checkbox"/> FOUNDATION <input checked="" type="checkbox"/> REGISTERED <input checked="" type="checkbox"/> CERTIFIED	
c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety		22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional)		IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS. <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED (If additional explanation is necessary, please use the space indicated on the reverse.)	
e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership			
f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) Mailed: 12/3/04			
g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$3,652), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)			
23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)		24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)	
25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate. The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.			
SIGNATURE OF OWNER 		SIGNATURE OF OWNER	
NAME (Please print or type) Gordhan L. Patel		NAME (Please print or type)	
CAPACITY OR TITLE Executive Vice President	DATE 20/1/05	CAPACITY OR TITLE	DATE

(See reverse for instructions and information collection burden statement)

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be **received** in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to **reproduce** the variety, or for tuber reproduced varieties verification that a viable (*in the sense that it will reproduce an entire plant*) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$3,652 (\$432 filing fee and \$3,220 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfiled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$432 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office

Telephone: (301) 504-5518

FAX: (301) 504-5291

Homepage: <http://www.ams.usda.gov/science/pvpo/pvpindex.htm>

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority and provide evidence that name has been cleared by the appropriate recognized authority before the Certificate of Protection is issued. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, 10301 Baltimore Avenue, Suite 401 NAL Building, Beltsville, MD 20705. Telephone: (301) 504-5682 <http://www.ams.usda.gov/lsg/seed.htm>.

ITEM

- 19a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
(2) the details of subsequent stages of selection and multiplication;
(3) evidence of uniformity and stability; and
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 19b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
(1) identify these varieties and state all differences objectively;
(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 19c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 19d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 19e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
20. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
23. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
24. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.

22. CONTINUED FROM FRONT (Please provide a statement as to the limitation and sequence of generations that may be certified.)

23. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

24. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

U.S. Patents assigned to the University of Florida Research Foundation, Inc: 5,922,390 (issued 7/13/1999); 6,063,984 (issued 5/16/2000); and 6,121,472 (issued 9/19/2000)

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. The fees for filing a change of address; owner's representative; ownership or assignment; or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

Origin and Breeding History of the Variety:

'Georgia-04S' is a new high-oleic small-seeded peanut (*Arachis hypogaea* L. subsp. *hypogaea* var. *hypogaea*) cultivar that was released to the University of Georgia Research Foundation by the Georgia Agricultural Experiment Stations in 2004. It was developed at the University of Georgia, Coastal Plain Experiment Station, Tifton, Georgia by Dr. William D. Branch for the same confectionary or candy market as used by spanish-type peanut (subsp. *fastigiata* var. *vulgaris*) cultivars.

Georgia-04S originated from a backcross made in 1993 between an F_4 Georgia high-oleic selection derived from (Georgia Browne X UF 435-O/L-2) X Georgia Browne, the recurrent parent. Georgia Browne is a small-seeded, multiple-disease resistant cultivar that was developed from a cross between Southern Runner and Sunbelt Runner. UF 435-O/L-2 is one of the original high-oleic spanish-type germplasm lines that was discovered and patented by the University of Florida Research Foundation. The pedigree selection method was practiced within the BC_1F_2 , BC_1F_3 , and BC_1F_4 segregating populations, and performance testing begun in the $BC_1F_{4.6}$ generation with the advanced pure breeding line, GA 982502. For the past five years (2000-2004), field observations and data indicate that the varietal characteristics of Georgia-04S are very uniform and stable, and no off-types or variants have yet been found.

PEDIGREE SELECTION METHOD

1993	Georgia Browne X F_4 GA High-Oleic Selection
1994	BC_1F_1 Increase
1995-1997	BC_1F_2 - F_4 Individual Resistant Plant Selections*
1998	BC_1F_5 Progeny Row Increase
1999-2003	BC_1F_6 - F_{10} Multilocations Yield Trials
2004	BC_1F_{11} Released as 'Georgia-04S'

* Individual plant selections were based upon high-oleic and low-linoleic fatty acid ratios, pod shape, seed size, testa color, growth habit, maturity, yield and grade characteristics. Because tomato spotted wilt virus (TSWV) was naturally occurring during these early segregation generations, individual plants were also selected for TSWV resistance.

EXHIBIT - B

Novelty Statement:

'Georgia-04S' is unique from other spanish-type peanut (subsp. *fastigiata*) cultivars in having a combination of high-oleic and low-linoleic fatty acid ratio, darker green foliage, more decumbent runner growth habit, medium maturity, and resistance to TSWV, similar to Georgia Browne (subsp. *hypogaea*). Each of these plant characteristics are highly heritable and very stable across environments. In four years (2000-2003) of tests in Georgia and Florida, Georgia-04S and Georgia Browne were found to have among the lowest TSWV and total disease incidence and produced significantly higher yield, grade, and dollar value return per acre than all other spanish-type cultivars.

FOUR-YEAR AVERAGE DISEASE INCIDENCE, POD YIELD, TSMK GRADE, SEED SIZE, AND DOLLAR VALUES OF GEORGIA-04S VS. FIVE OTHER SPANISH-TYPE CULTIVARS IN GEORGIA, 2000-2003.

Peanut Variety	TSWV [‡] (%)	TD [‡] (%)	Yield (lb/a)	TSMK (%)	Seed (no./lb)	Value (\$/a)
Georgia Browne	8.0 c*	22.9 c	3844 a	73 a	1077 a	956 a
[†] Georgia-04S	9.7 c	22.1 c	3581 a	73 a	1080 a	886 a
Tamspan 90	12.5 bc	27.5 bc	2757 b	68 b	1118 a	652 b
[†] OLin	14.7 b	30.8 b	1999 c	66 bc	1142 a	452 c
Pronto	20.5 a	43.9 a	1832 c	66 bc	1122 a	427 c
Spanco	20.8 a	44.6 a	1886 c	64 c	1097 a	416 c

*Means within the same column followed by the same letter do not differ significantly at $P \leq 0.05$.

[†]High-Oleic

[‡]Percentage of tomato spotted wilt virus (TSWV) incidence at about mid-season.
Percentage of total disease (TD) incidence prior to digging, primarily TSWV and white mold or stem rot.

FOUR-YEAR AVERAGE DISEASE INCIDENCE, POD YIELD, TSMK GRADE, SEED SIZE, AND DOLLAR VALUES OF GEORGIA-04S VS. FIVE OTHER SPANISH-TYPE CULTIVARS IN FLORIDA, 2000-2003.

Peanut Variety	TSWV [†] (%)	Yield (lb/a)	TSMK (%)	Seed (no./lb)	Value (\$/a)
Georgia Browne	13.2 c*	4571 a	77 a	997 a	1176 a
[†] Georgia-04S	6.7 c	4186 a	78 a	993 a	1074 a
Tamspan 90	9.8 c	3294 b	73 b	1017 a	848 b
Spanco	22.8 ab	2668 c	73 b	952 a	676 c
[†] OLin	15.0 bc	2490 c	74 b	1027 a	631 c
Pronto	24.4 a	2420 c	73 b	948 a	615 c

*Means within the same column followed by the same letter do not differ significantly at $P \leq 0.05$.

[†]High-Oleic

[†]Percentage of tomato spotted wilt virus (TSWV) incidence at about mid-season.

Georgia-04S is most similar to Georgia Browne (see photo). However, Georgia-04S is distinctively different from Georgia Browne in having a higher oleic and lower linoleic fatty acid oil content. Georgia-04S is similar to OLin in having a high O/L fatty acid ratio for longer shelf-life and better nutrition. However, Georgia-04S and Georgia Browne are distinctively different from OLin and all other spanish-type cultivars in belonging to a totally different botanical subspecies (*hypogaea* vs. *fastigiata*).

THREE-YEAR AVERAGE PERCENTAGE OF OLEIC AND LINOLEIC FATTY ACID COMPARISON BETWEEN GEORGIA-04S VS. OLIN AND GEORGIA BROWNE IN GEORGIA, 2000-02.

Peanut Variety	% Fatty Acid		O/L
	Oleic	Linoleic	Ratio
Georgia-04S	87.79 a	2.59 b	34.25 a
OLin	85.44 b	2.58 b	33.52 a
Georgia Browne	58.25 c	27.19 a	2.17 b

*Means within the same column followed by the same letter do not differ significantly at $P \leq 0.05$.

The ANOVA Procedure

Dependent Variable: PercentOleicFA

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Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	19	9887.93843	520.41781	151.63	<.0001
Error	34	116.69570	3.43223		
Corrected Total	53	10004.63413			

R-Square	Coeff Var	Root MSE	PercentOleicFA Mean
0.988336	2.400951	1.852627	77.16222

Source	DF	Anova SS	Mean Square	F Value	Pr > F
Rep	17	181.584733	10.681455	3.11	0.0024
Entry	2	9706.353700	4853.176850	1414.00	<.0001

The ANOVA Procedure

Waller-Duncan K-ratio t Test for PercentOleicFA

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NOTE: This test minimizes the Bayes risk under additive loss and certain other assumptions.

Kratio	100
Error Degrees of Freedom	34
Error Mean Square	3.432226
F Value	1414.00
Critical Value of t	1.80118
Minimum Significant Difference	1.1123

Means with the same letter are not significantly different.

Waller Grouping	Mean	N	Entry
A	87.7939	18	11 ✓ = Georgia-045
B	85.4422	18	2 ✓ = Olin
C	58.2506	18	1 ✓ = Georgia Broune

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GA ~~Am~~ % Oleic ~~OH~~ ~~in~~ GA-045

Entry	1	2	11
1	58.53	83.7	86.39
2	55.91	83.97	85.22
2000 Test 01 6 days	3	54.72	82.63
	4	52.91	82.68
	5	55.64	81.68
	6	52.3	83.4
	7	55.78	86.65
	8	54.89	86.07
2001 Test 01 6 days	9	62.79	86.17
	10	58.63	86.16
	11	60.91	86.43
	12	58.61	87.69
	13	62.79	85.82
	14	59.64	86.26
2002 Test 01 6 days	15	63.67	87.1
	16	58.58	87.22
	17	62.75	87.42
	18	59.46	86.91

The ANOVA Procedure

Dependent Variable: PercentLinoleicFA

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Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	19	7299.595924	384.189259	201.82	<.0001
Error	34	64.722996	1.903618		
Corrected Total	53	7364.318920			

R-Square	Coeff Var	Root MSE	PercentLinoleicFA Mean
0.991211	12.79204	1.379716	10.78574

Source	DF	Anova SS	Mean Square	F Value	Pr > F
Rep	17	34.394654	2.023215	1.06	0.4243
Entry	2	7265.201270	3632.600635	1908.26	<.0001

The ANOVA Procedure

Waller-Duncan K-ratio t Test for PercentLinoleicFA

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NOTE: This test minimizes the Bayes risk under additive loss and certain other assumptions.

Kratio	100
Error Degrees of Freedom	34
Error Mean Square	1.903618
F Value	1908.26
Critical Value of t	1.80100
Minimum Significant Difference	0.8283

Means with the same letter are not significantly different.

Waller Grouping	Mean	N	Entry
A	27.1894	18	1 — = Georgia Browne
B	2.5889	18	11 ✓ = Georgia-045
B			
B	2.5789	18	2 — = Ohio

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0002PLFA

% Linoleic

Entry	04 Same	05	11 04-05
1	24.96	3.02	2.93
2	28.27	2.66	2.35
2000 Test 01 3	27.66	3.04	2.89
4	29.5	2.86	2.95
5	26.3	2.74	2.9
6	31.83	2.49	3.02
7	30.38	2.58	2.58
8	30.91	2.38	2.59
2001 Test 01 9	24.4	2.47	2.48
10	28.46	2.2	2.54
11	25.61	2.5	2.43
12	27.69	2.09	2.42
13	25.54	2.52	2.75
2002 Test 01 14	25.89	2.7	2.41
15	23.93	2.28	2.36
16	26.43	2.56	2.06
17	23.93	2.95	2.47
18	27.72	2.38	2.47

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

Exhibit C

OBJECTIVE DESCRIPTION OF VARIETY
Peanut (*Arachis hypogaea*)

NAME OF APPLICANT (S)	TEMPORARY OR EXPERIMENTAL DESIGNATION	VARIETY NAME
Univ. of GA. Res. Foundation	GA 982502	Georgia-04S
ADDRESS (Street and No. or RD No., City, State, Zip Code, and Country)		FOR OFFICIAL USE ONLY
Boyd Graduate Studies Research Center Athens, GA 30602-7411		PVPO NUMBER
		2005 00121

PLEASE READ ALL INSTRUCTIONS CAREFULLY:

Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box

e.g., or) when a number is either 99 or less or 9 or less.

1. BOTANICAL TYPE:

Flowering on the Main Stem: 1 = Absent 2 = Present

Branching Pattern: 1 = Alternate – Pairs of vegetative and reproductive branches (Virginia)
2 = Sequential – Continuous reproductive branches (Valencia-Spanish)
3 = Other (Specify) _____

2. PLANT:

Habit: 1 = Prostrate (Florunner) 2 = Decumbent (NC-5) Branching: 1 = Sparse (Valencia) 2 = Moderate (Starr)
2 = Semi-Erect (Florispant) 4 = Erect (Starr) 3 = Profuse (Florunner)

3. MATURITY:

Region: 1 = Virginia, North Carolina 2 = Southeast United States 3 = Southwest United States 4 = Other

Number of Days to Maturity = Approximately in South Georgia

Number of Days Earlier Than } 1 = Starr 2 = Florunner 3 = Florigiant
4 = Virginia 61R 5 = NC-2
6 = NC-5 7 = Southeastern Runner 56-15
8 = Other (Specify) Georgia Browne

4. LEAVES:

Color at 60 Days (Nickerson Color Designation 5 G 4/7) 1=Light Green (10gy 6/9)
 mm Leaflet Length (Basal Leaflet of the Youngest Fully Opened Leaf) 2= Medium Green (2.5G 5/9)
 Leaflet Length/Width Ratio 3=Dark green (5G 4/7)
4= Other (Specify)

Variety	Leaflet length (mm)	Leaflet length/width ratio
Georgia Browne	56	2.31
OLin	67	2.37

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5. **POD** (Average for 20 pods at maturity):

mm Length mm Diameter
 KG./HA. Pod Yield = Mean of four years (2000-2003) in Georgia
 % Less Than } 1 = Starr 2 = Florunner 3 = Florigiant
 % More Than 4 = Virginia 61R 5 = NC-2
 6 = NC-5 7 = Southeastern Runner 56-15
 8 = Other (Specify) OLin
 % Fancy Size: (% riding 13.46 mm., 3/4 Inch, Spacing Set on Presizer Roller)
 Number of Seeds per Pod: 1 = 1 2 = 2 3 = 3 4 = 3-4 5 = 2-3-4
 Constriction: 1 = Shallow or None (Virginia 56R, Argentine) 2 = Medium (Virginia 61R) 3 = Deep (Starr)
 Surface: 1 = Glabrous (Florunner) 2 = Pubescent (Florispan)
 Beak: 1 = Absent 2 = Inconspicuous 3 = Pronounced

6. **SEED** (Mature, cured but not aged):

Coat Color: 1 = White (Pearl) 2 = Cream 3 = Tan (Starr) 4 = Brown 5 = Pink (Florigiant)
 6 = Red 7 = Purple 8 = Dark Purple 9 = Variegated
 10 = Other (Specify) light pink
 Coat Surface: 1 = Smooth 2 = Undented 1 = Uniform Color 2 = Blemished
 Shape: 1 = Spheriodal (Starr) 2 = Short Broad (Florunner) 3 = Elongated-Slender (Dixie Runner)
 4 = Cylindrical-tapered Ends 5 = Cylindrical Blunt Ends (NC-2) 6 = Other (Specify) small runner
 mm Length mm Width Grams per 100 Seeds (8% Moisture)

7. **DISEASE RESISTANCE:** (0 = Not Tested, 1 = Susceptible, 2 = Moderately Susceptible, 3 = Moderately Resistant, 4 = Resistant)

Southern Stem Rot Rust Early Leaf Spot Virus X TSWV
 Southern Leaf Spot Mosaic Pod Rot Complex Other (Specify) _____

8. **INSECT RESISTANCE:** (0 = Not Tested, 1 = Susceptible, 2 = Moderately Susceptible, 3 = Moderately Resistant, 4 = Resistant)

Thrips Burrowing Bug Leaf Hopper Nematode (Specify species) _____
 Southern Corn Rootworm Lesser Cornstalk Borer Aphid Other (Specify) _____

9. **COMPARISON OF SUBMITTED VARIETY WITH ONE OR MORE SIMILAR VARIETIES:**

VARIETY	OIL* (%)	PROTIEN* (%)	OLEIC: * LINOLEIC ACID RATIO	IODINE* NUMBER	SHELLING (%)	SMK** (%)	ELK+ (%)	MAIN STEM HEIGHT (CM)
Submitted	47	26	33.9	75	78	73	11	36
Similar	48	24	33.1	74	78	73	6	37
Name of Similar Variety	GA Browne	GA Browne	OLin	OLin	GA Browne	GA Browne	GA Browne	GA Browne

* From Sound Mature Kernels

** Sound Mature Kernels

+ Extra Large Kernels

10. **INDICATE A VARIETY WHICH MOST CLOSELY RESEMBLES THAT SUBMITTED:**

CHARACTER	VARIETY	CHARACTER	VARIETY
Pod Color	Georgia Browne	Seedling Vigor	Georgia Browne
Seed Dormancy	Georgia Browne	Hull Thickness	Georgia Browne
Seed Size	Spanish types	Leaf Color	Georgia Browne

11. **COMMENTS:** (Additional description or clarification – such as: relative disease reactions may be compared with standard varieties)

TSWV and total disease incidence is similar between Georgia-04S and Georgia Browne.

EXHIBIT-D

Additional Description of the Variety:

Shelling outturn is an important market characteristic of peanut varieties. The greater the sound mature kernel (SMK) and total meat content the better grade and price for the farmer, and more peanuts for the sheller, manufacturer, and consumers. Both Georgia-04S and Georgia Browne have significantly higher percentage of SMK and meat than all other spanish-type varieties.

FOUR-YEAR AVERAGE SHELLING OUTTURN OF GEORGIA-04S VS. FIVE OTHER SPANISH-TYPE CULTIVARS IN GEORGIA, 2000-2003.

Peanut Variety	Jumbo [†] (%)	Med. [‡] (%)	No. 1 [‡] (%)	SMK (%)	SS (%)	OK (%)	DK (%)	Meat (%)	Hull (%)
Georgia-04S	11 a*	40 b	17 d	68 a	5 a	5 b	0 a	78 a	22 c
Georgia Browne	6 ab	45 a	18 cd	69 a	5 a	4 b	0 a	78 a	22 c
Tamspan 90	4 b	35 c	27 a	66 b	2 b	6 ab	0 a	74 bc	26 ab
OLin	6 ab	36 c	21 bc	63 cd	3 b	6 ab	1 a	73 c	27 a
Spanco	4 b	35 c	22 b	61 d	3 b	7 a	2 a	73 c	27 a
Pronto	3 c	38 bc	23 b	64 bc	3 b	7 a	1 a	75 b	25 b

*Means within the same column followed by the same letter do not differ significantly at $P \leq 0.05$.

[†] Jumbo = +21/64 inch screen.

[‡]Medium = -21/64 + 18/64 inch screen.

[‡] No. 1 = -18/64 + 15/64 inch screen.

The ANOVA Procedure

Dependent Variable: O_L_Ratio

2005 00121

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	19	12336.60281	649.29488	94.11	<.0001
Error	34	234.57796	6.89935		
Corrected Total	53	12571.18078			

R-Square	Coeff Var	Root MSE	O_L_Ratio Mean
0.981340	11.26670	2.626662	23.31349

Source	DF	Anova SS	Mean Square	F Value	Pr > F
Rep	17	257.78373	15.16375	2.20	0.0248
Entry	2	12078.81909	6039.40954	875.36	<.0001

The ANOVA Procedure

Waller-Duncan K-ratio t Test for O_L_Ratio

2005 00121

NOTE: This test minimizes the Bayes risk under additive loss and certain other assumptions.

Kratio	100
Error Degrees of Freedom	34
Error Mean Square	6.899352
F Value	875.36
Critical Value of t	1.80163
Minimum Significant Difference	1.5774

Means with the same letter are not significantly different.

Waller Grouping	Mean	N	Entry
A	34.2498	18	11 / = Georgia-045
A			
A	33.5240	18	2 / = Ohio
B	2.1667	18	1 / = Georgia Brumme

12/2/2004

0002OLFA

O/L Ratio

2000-02

Rep	GL-Bromine <u>1</u>	OLin <u>2</u>	GL-D45 <u>3</u>
1	2.34	27.72	29.48
2	1.98	31.57	36.26
3	1.98	27.18	30.29
4	1.79	28.91	29.51
5	2.12	29.81	29.83
6	1.64	33.49	28.71
7	1.84	33.58	34.36
8	1.78	36.16	34.37
9	2.57	34.89	36.08
10	2.06	39.16	35.22
11	2.38	34.57	36.03
12	2.12	41.96	36.95
13	2.46	34.06	31.57
14	2.3	31.95	36.78
15	2.66	38.2	37.14
16	2.22	34.07	41.86
17	2.62	29.63	35.92
18	2.14	36.52	36.13

2000
Test 012001
Test 012002
Test 01

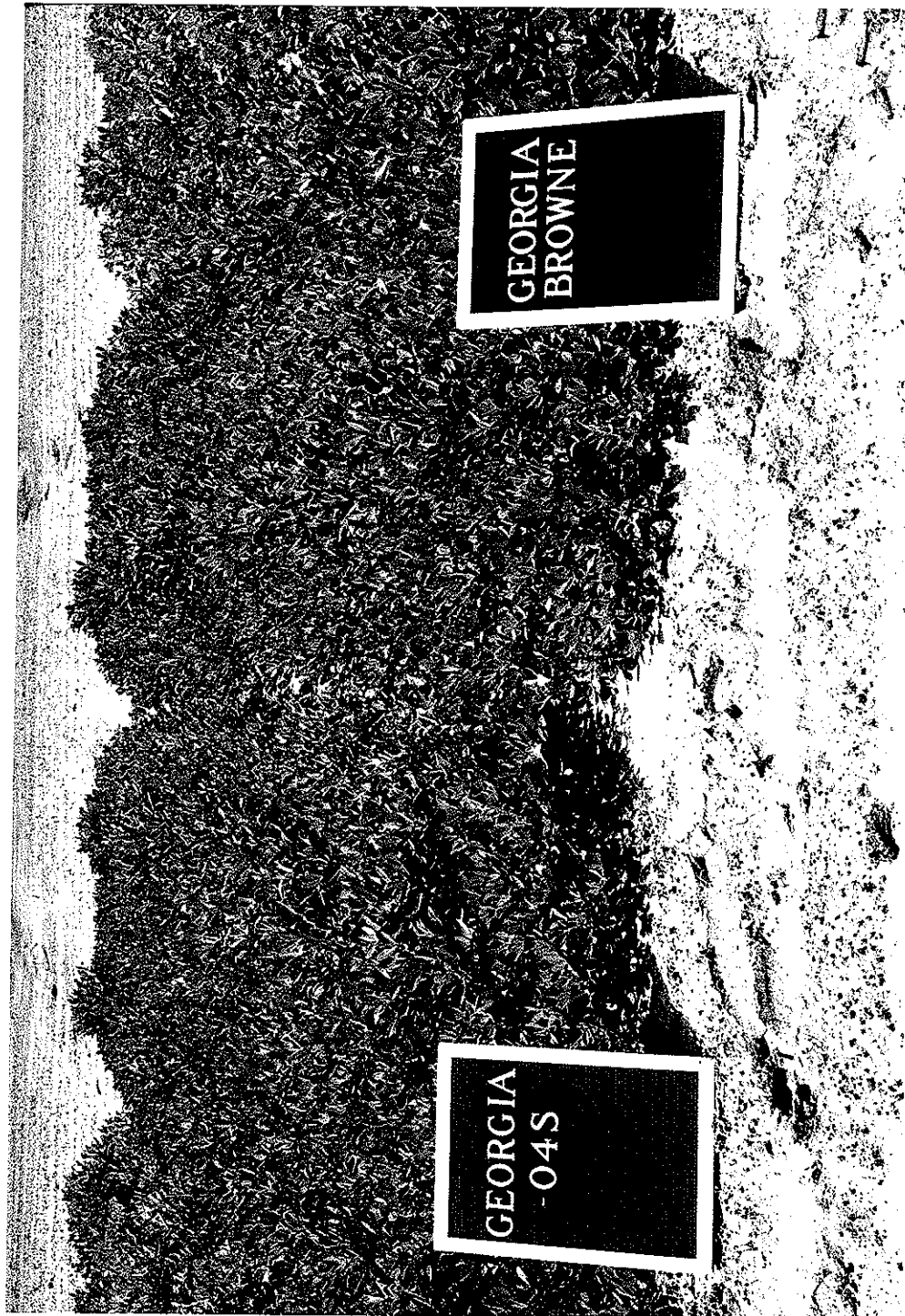


EXHIBIT - E

**UNIVERSITY OF GEORGIA RESEARCH FOUNDATION, INC.
STATEMENT OF APPLICANT'S OWNERSHIP**

The variety for which plant variety protection is hereby sought was developed by William D. Branch, an employee at the University of Georgia Agricultural Experiment Station. The Georgia Agricultural Experiment Station is a part of The University of Georgia. The University of Georgia is one of the universities in the University System of Georgia. The Board of Regents of the University System of Georgia ("Board of Regents") is a body that was created by the Constitution of the State of Georgia and is charged with the responsibility of operating the universities in the University System of Georgia. The University of Georgia Research Foundation, Inc. is a Georgia nonprofit corporation which was incorporated to, among other things, own and exploit intellectual property developed or created at The University of Georgia. One June 9, 1982, the Board of Regents approved a Patent Policy regarding inventions and discoveries by persons employed at the University of Georgia. As an employee at the Georgia Agricultural Experiment Station, William D. Branch is subject to said Patent Policy. Rights in novel plant varieties developed at the University of Georgia, including Georgia-04S, are covered by said Patent Policy. By agreement, the Board of Regents assigned to the University of Georgia Research Foundation, Inc. all rights in intellectual property covered by said Patent Policy. This agreement applies to then existing intellectual property and to intellectual property which was developed thereafter.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICEEXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) University of Georgia Research Foundation, Inc.	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER GA 982502	3. VARIETY NAME Georgia-04S
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) Boyd Graduate Studies Research Center Athens, GA 30602-7411	5. TELEPHONE (Include area code) (706) 542-5944	6. FAX (Include area code) (706) 542-3837
7. PVPO NUMBER 2005 00121		

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain. ☒ YES ☐ NO

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? If no, give name of country. ☒ YES ☐ NO

10. Is the applicant the original owner? ☐ YES ☒ NO If no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☒ YES ☐ NO If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☐ YES ☐ NO If no, give name of country

11. Additional explanation on ownership (Trace ownership from original breeder to current owner. Use the reverse for extra space if needed):

See attached.

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 0.1 hour per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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